Crossing the chasm: The RPA diffusion process and the respective role of consulting firms

Marisa Drinkmann

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Abstract

Title: Crossing the chasm: The RPA diffusion process and the respective role of consulting firms

Author: Marisa Drinkmann

This thesis studies the diffusion of robotic process automation (RPA) and the respective role of consultants. Using the diffusion of innovation theory lens, evidence suggests that RPA adoption is facing a chasm, currently at a turning point of gaining traction.

Based on 17 semi-structured interviews of consultants with RPA expertise, a qualitative content analysis using Gioia's methodology was conducted and key findings were derived. Interviews confirm previous literature on the benefits of RPA, namely increased efficiency, quality improvement, and task reallocation, which are expected to persist as shortage of skilled workers and cost pressure drive the need for efficiency and automation. However, challenges are preventing companies from further adopting RPA, specifically lack of knowledge and acceptance, fear of job loss, and maintenance efforts. This study contributes to the literature by identifying five success factors on how to cross this diffusion chasm. First, strategically integrating RPA in a digital ecosystem allows for an end-to-end perspective. Second, enabling transparent communication through expectation management and knowledge sharing is essential. Third, companies need to prioritize processes over technologies. Fourth, ensuring organizational integration through employee empowerment and C-level support is key. Finally, future potential of RPA resides in scalability and integration of other technologies.

In this process, consultants play a significant role in influencing RPA adoption. Evidence suggests consultants are expected to provide independent and holistic advice and to facilitate crossing the chasm by being trusted advisors, strategic sparring partners, and change agents. By staying informed, consultants can provide sophisticated advice and drive RPA adoption.

Key Words: Robotic Process Automation, RPA Implementation, Digital Transformation, Consulting Firms, Diffusion of Innovation Theory, Crossing the diffusion chasm

Abstrato

Título: Atravessar o abismo: O processo de difusão da RPA e o respetivo papel das empresas de consultoria

Autor: Marisa Drinkmann

Esta tese estuda a difusão da automação de processos robóticos (RPA) e o respectivo papel das firmas de consultoria. Utilizando a lente da teoria da difusão da inovação, evidências recolhidas sugerem que a adoção da RPA está perante um fosso.

Baseado em 17 entrevistas semiestruturadas com consultores de RPA e numa análise de conteúdo qualitativa usando a metodologia Gioia, este estudo oferece algumas descobertas relevantes. As entrevistas confirmam a literatura sobre os benefícios da RPA, como aumento de eficiência, realocação de tarefas e simulação de interfaces, tendências que são esperadas persistir devido à escassez de trabalhadores qualificados e à pressão dos custos. No entanto, alguns desafios estão a impedir a adoção mais ampla da RPA, especialmente a falta de conhecimento e aceitação, o medo de perder empregos e os esforços de manutenção. Este estudo contribui para a literatura identificando cinco fatores chave para atravessar este fosso. Primeiro, integrar estrategicamente a RPA num ecossistema digital permite uma perspetiva integral. Segundo, a comunicação transparente é essencial, incluindo gestão de expectativas e partilha de conhecimento. Terceiro, as empresas precisam priorizar processos sobre tecnologias. Quarto, a integração organizacional através do empoderamento dos colaboradores e apoio ao nível executivo é chave. Finalmente, o potencial futuro da RPA reside na sua escalabilidade e integração com outras tecnologias.

Os consultores desempenham um papel importante na adoção da RPA, facilitando a travessia do fosso sendo conselheiros confiáveis, parceiros estratégicos e agentes de mudança. Mantendo-se atualizados, os consultores podem fornecer conselhos sofisticados e impulsionar a adoção da RPA.

Palavras chave: Automatização de processos robóticos, Implementação da RPA, Transformação digital, Empresas de consultoria, Teoria da difusão da inovação, Atravessar o abismo da difusão

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AI	Artificial Intelligence
DT	Digital Transformation
ROI	Return on Investment
RPA	Robotic Process Automation

1 Introduction

The interest in digital transformation (DT) has accelerated over the past years and has shifted the focus of academics and practitioners to digital strategies and technologies. The speed of new technologies emerging in the market largely impacts the economy and therefore creates time pressure on management (Angelopoulos et al., 2023; Firk et al., 2021; Hanelt et al., 2021; Verhoef et al., 2021). One of those technology innovations is robotic process automation (RPA), which addresses the economic need for efficiency. It entails software bots mimicking human behavior to automate business process steps (Flechsig et al., 2022; Lacity & Willcocks, 2016). Throughout this study, the diffusion of RPA and the role of consulting firms will be analyzed. The RPA market growth to $2.8 billion in 2022 underlines its relevance. The software market grew at a rate of 11.3% in 2022, whereas RPA achieved a growth of 22.1%, which furthermore reflects its significance in the current technology stack (Metha et al., 2023). Although rapid growth has been observed, almost half of the companies have not yet implemented software bots and only 4% have met their scaling potential (Horton et al., 2018; PwC, 2020). The first research question addresses this paradox and research gap:

What factors influence the diffusion and implementation of RPA?

The diffusion of innovation theory will be used to embed this research question in a theoretical foundation. This allows for a structured analysis of components that influence the process. Based on a study from 2020, only 8% of firms implement RPA solely using internal resources. External resources are typically hired to support implementation and maintenance projects (PwC, 2020). A study from 2021 in Europe indicates that the most significant practice areas of consulting services are related to corporate strategy [20%], information technology [24%], and process management [21%] (Graefe, 2023). This underlines the relevance of consulting firms, who can be hired as external resources, as RPA touches on these consulting areas. Thus, consultants have the potential to influence implementation and adoption. Therefore, consulting firms play a relevant role in RPA related projects. The thesis consequently addresses the following research question:

How do consulting firms influence the implementation and adoption of RPA?

In conclusion, this study aims at enhancing the knowledge regarding the diffusion of RPA by exploring the benefits, challenges, and success factors of adoption and implementation. Simultaneously, the thesis seeks to contextualize RPA within the DT phenomenon and analyses its strategic relevance. Consulting firms have been identified as key stakeholders in

RPA projects and, as such, the thesis provides valuable insights into the role of consultants. Next to the theoretical contributions, this study has managerial implications for companies navigating through the RPA landscape and for consultants aligning their service offerings with current business needs and technology trends.

This research adopts a qualitative research methodology to account for the complexity and variety of perspectives of the topic. Furthermore, this dissertation follows an academic research format and will be structured as follows: A systematic literature review in *chapter two* enables in-depth understanding of the theoretical concepts regarding DT, RPA, diffusion of innovation theory, and consulting firms. The literature review guides the conducted research as it reflects the current state of knowledge as well as research gaps. *Chapter three* creates the methodological foundation and justification of this study. This chapter also describes the procedures regarding sampling, data collection, and data analysis. *Chapter four* presents a synthesis of the main findings of this study, pointing to five aggregated dimensions. Each dimension relates to priorly analyzed theory in *chapter five*. This chapter sheds light on significant theoretical contributions as well as managerial implications. Lastly, *chapter six* provides a summary of the main findings and implications of the diffusion of RPA and the role of consulting firms.

2 Literature review

The literature review aims to comprehend the emergence of DT, benefits and challenges of RPA, and the role of consulting firms. To provide a theoretical foundation for this study, the lens of diffusion of innovation theory was used and therefore included in the literature review. This established understanding will serve as a guideline for further research on the topic and will enable contextualizing research findings. The current state of research was critically reviewed and core findings were merged. The search engines *Google Scholar* and *EBSCO* were utilized by using keywords such as *digital transformation, automation, robotic process automation, diffusion of innovation theory, diffusion chasm,* and *impact of consulting services.* The review is limited to peer reviewed articles and 41 out of the 46 cited academic journals received a grade of three or four in the Academic Journal Guide published by the Chartered Associated Business Schools (Chartered Associated Business Schools, 2021). Additionally, eight publications from consulting firms enrich the literature review as they provide novel and practice-oriented insights. Furthermore, two reports on market insights and four books regarding theoretical and methodological concepts were included.

2.1 Digital Transformation

Today's economy is driven by digital technologies emerging quickly in a broad range of social and economic spheres (Verhoef et al., 2021). This disruption is characterized by the availability of large amounts of data, new business opportunities, and velocity (Angelopoulos et al., 2023; Hanelt et al., 2021). Those developments have led to an accelerated interest and importance of digital strategies and transformation, thereby creating time pressure on top management (Angelopoulos et al., 2023; Firk et al., 2021; Hanelt et al., 2021). The urgency is caused by changing market conditions, characterized by numerous market entries, hyper-competition, and changing and/or disappearing boundaries (Verhoef et al., 2021).

Competition has been accelerated severely due to the variety, globality, and volatility of market players (Verhoef et al., 2021). Market insights can be derived from corporations, which can be further divided as being *'born digital'* or traditional (Li, 2020). Strong customer relationships have been a key denominator for companies in sustaining superior performance while offering reliable and good quality products and services. However, DT has enabled companies to personalize customer interactions, enable data driven decision-making, and create digital business models (Conway & Codkind, 2021). Traditional companies have transformed their business to different extents but often lacked speed and financial resources to implement these changes effectively and efficiently (Li, 2020). Therefore, the speed with which *'born digital'* companies adapt to new technologies, business models, and players in the market often drives their superior performance (Conway & Codkind, 2021; Li, 2020; Verhoef et al., 2021).

Companies need to adopt digital technologies and implement digital strategies by addressing the *Why*, *How,* and *What* (Yang et al., 2021). The *Why* includes identifying the drivers and recognizing the importance of the digital era (Verhoef et al, 2021; Yang et al., 2021). Methodologies and processes need to be analyzed and developed for changing the business and address the question of *How* (Verhoef et al., 2021; Yang et al., 2021). Lastly, the *What* enables a holistic view of opportunities and potential outcomes of adopting digital technologies (Dhasarathy et al., 2022; Yang et al., 2021).

To become a company that runs a technology driven business, three stages need to be completed successfully: Digitization, Digitalization and DT (Dhasarathy et al., 2022; Verhoef et al., 2021). Digitization generally entails converting analog tasks and information into digital formats. Whereas digitalization changes existing processes by adopting digital technologies (Verhoef et al., 2021). The most advanced phase is DT, which is defined as the

"deliberate, strategic repositioning of one's business in today's digital economy" (Conway & Codkind, 2021, p.1). DT entails a comprehensive transformation of business models and value propositions driven by the diffusion of digital technologies and implicates the necessity to incorporate digital in the companies' corporate strategy (Firk et al., 2021; Hanelt et al., 2021; Leinwand & Mani, 2021; Verhoef et al., 2021). The incremental stages of digitization and digitalization need to be prioritized as many companies are still at the beginning of adopting new technologies and starting their transformation journey (Verhoef et al., 2021). Only when a company uses digital technologies and has a sufficient digitized infrastructure, DT initiatives can be implemented successfully.

2.2 Robotic Process Automation

A shift from "human driven, technology supported to technology driven, human supported dynamics" (Angelopoulos et al., 2023, p.878) has been observed. This has significantly changed the relationship and interaction between humans and technology by raising synergies and introducing automation tools (Angelopoulos et al. 2023; Hanelt et al. 2021; Makowski & Kajikawa, 2021). One essential component within the latter is RPA. RPA is a robotic software, which enables automating repetitive and time-consuming tasks that are based on clear rule sets. These software bots mimic human behavior and use structured data to generate objective and pre-defined outcomes (Flechsig et al., 2022; Lacity & Willcocks, 2016). If combined with other technology, such as Artificial Intelligence (AI), RPA can be enhanced and further drive DT. This would broaden RPA's scope from automating time-consuming tasks with high consistency and precision to doing cognitive tasks, for example including decision making (Angelopoulos et al., 2023).

2.2.1 Benefits of RPA

RPA can be described as a low invasive technology, as changes to the IT infrastructure are not required (Didion et al., 2019). In contrast to adding another software to a fragmented environment, RPA can be installed on top of existing software (Didion et al., 2019). Advantages resulting from applying RPA can be clustered into five main categories:

Efficiency. Automating time sensitive and time-consuming manual tasks result in significant time savings and increased efficiency (Bode et al., 2022; Flechsig et al., 2022; PwC, 2020; Shelton & Wegener, 2023). This productivity effect is enhanced as RPA bots, unlike humans, can operate quicker and may work uninterruptedly for 24 hours a day (Flechsig et al., 2022).

Quality. By introducing clear rule sets, tasks are completed with high levels of precision and significantly reduced error rates, which cannot be achieved with human capabilities (Flechsig et al., 2022). Most RPA providers have standardized monitoring and reporting processes installed, which enable strengthened and facilitated control (Didion et al., 2019). Therefore, increased quality and improved compliance rates are widespread outcomes of RPA (Lacity & Willbrocks, 2016; PwC, 2020).

Process management. Precise process descriptions and clear data structures are prerequisites for the application of RPA (Bode et al., 2022; Flechsig et al., 2022; Grönke & Wenning, 2021; PwC 2020). Therefore, RPA plays a relevant role in harmonizing, structuring, and ultimately optimizing business processes across the organization (Flechsig et al. 2022; Grönke & Wenning, 2021). Extensive use of RPA can lead to fully automized business processes (Lacity & Willcocks, 2016).

Financial Benefits. On the one hand, RPA bots are cost-effective alternatives to humans and similarly achieve the above-mentioned benefits of efficiency, quality, and compliance. This results in significant cost savings (Flechsig et al., 2022; Verhoef et al., 2021). On the other hand, RPA is a technology that is rather easy and quick to implement as neither changes to the IT infrastructure nor intensive programming are required (Didion et al., 2019; Flechsig et al., 2022). Therefore, high returns on investment (ROI) can be achieved within the first year of implementation (Lacity & Willbrocks, 2016; McKinsey & Company, 2017).

Employee satisfaction. As software bots conduct routine time-consuming tasks, they free up time for employees to engage in meaningful work, for example problem solving, creativity, or strategic tasks (Flechsig et al., 2022; Lacity & Willcock, 2016; Shelton & Wegener, 2023). In summary, RPA can reduce employees stress levels and enable jobs to become more interesting (Lacity & Willcock, 2016; McKinsey & Company, 2017).

Despite companies having identified the automation potential through RPA and the related advantages, many companies have not yet exhausted its potential (Grönke & Wenning, 2021; Horton et al., 2018; PwC, 2020). This room for growth is underlined by surveys conducted by consulting companies, like PwC and Horváth & Partners, in 2020 and 2021, which identified that almost 50% of surveyed companies do not yet use RPA. However, survey results also reflect that many companies are intrigued to either start implementing RPA or have already started proof of concept phases (Grönke & Wenning, 2021; PwC, 2020).

2.2.2 Challenges of RPA

Implementing RPA is facing organizational barriers, which need to be addressed.
First, knowledge deficits as well as fear of costly and complex implementation have been identified as the main reasons that hinder companies from using RPA (PwC, 2020). Second, the power of automation raises a widespread concern that software bots will replace employees (PwC, 2020; Spring et al., 2022). Consequently, automation is resisted within corporations and employees are not willing to cooperate in corresponding projects. However, research found that this replacement rarely occurs as tasks rather than jobs are subject to automation (Sampson, 2021; Spring et al., 2022; PwC, 2020). Finally, companies face significant challenges when scaling their RPA initiatives (Edlich & Sohoni, 2017; Horton et al., 2018). This is underlined by a survey conducted by Deloitte in 2018, where only 4% of surveyed companies have reached their scaling potential (Horton et al., 2018). Reasons for the lack of scalability often result from organizational barriers such as lack of standard processes, changing environments, and absence of long-term objectives (Edlich & Sohoni, 2017; Horton et al., 2018).

2.2.3 RPA: Automation or augmentation?

Automation refers to human tasks being performed by machines with the goal of eliminating human involvement in the task. Routine assignments with clear structures, like creating invoices, are often very time-consuming. By automating those tasks employees can be reallocated to more challenging and value adding work that relates to their professional expertise (Spring et al., 2022). Augmentation describes the collaboration of machines and humans (Raisch & Krakowski, 2021). This enables tasks with higher complexity to be conducted as strengths from both humans, like common sense, and robots, like efficiency and accuracy, are combined (McKinsey & Company, 2017; Raisch & Krakowski, 2021).

Often, it is not possible to strictly classify a technology as either automation or augmentation. However, this creates a tension, as it is no longer clear if humans should be involved or replaced (Raisch & Krakowski, 2021). RPA can be seen as a technology that combines automation and augmentation. Generally, tasks do not arise in isolation but rather are a part of a business process. If specific assignments within the workflow are automated by using RPA, this influences other steps within the business process that precede or follow the automated task (Raisch & Krakowski, 2021; Spring et al., 2022). This is referred to as “one task spill[ing] over enabling adjacent tasks’ augmentation” (Raisch & Krakowski, 2021, p.197). As a result, professionals have to learn how to interact with software bots to ensure a

frictionless business process. The phenomenon of a high performing workforce composed of humans and robots is called augmented workforce (Lacity & Willcocks, 2016; Shelton & Wegener, 2016).

2.3 Diffusion of Innovation

An innovation includes "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p.11). Digital innovation "is a specific type of innovation during which business transformations are supported by IT" (Van Looy, 2021, p.2), which impacts a company's strategy, organization, and/or processes. The adoption ultimately leads to developing a deeper understanding of technological opportunities and may accelerate the diffusion of other emergent technologies (Makowski & Kajikawa, 2021; Zangiacomi et al., 2020). The diffusion of innovation theory by Everett Rogers, first introduced in 1962, is a solid theoretical basis on how innovations are adopted and what components influence the adoption process and rate (Altinkemer et al., 2011; Wamba & Queiroz, 2022).

2.3.1 Adopter categories

Rogers has established five different adopter categories based on innovativeness, which are visualized in Figure 1.

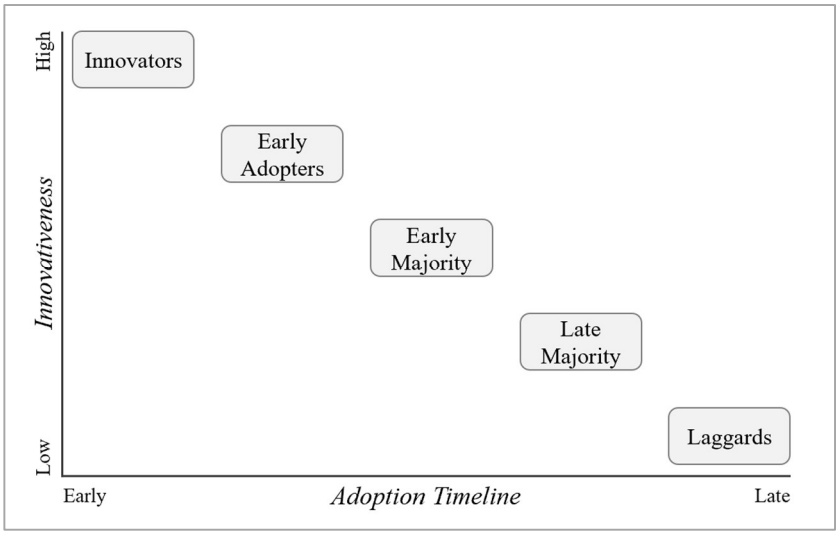

Figure 1: Adopter categories within the diffusion of innovation theory
Source: Own illustration based on Rogers (2003).

Innovators, characterized by venturesomeness, are the first to adopt an innovation and therefore play a significant role in introducing an innovation into the market. They are followed by the early adopters, who are typically referred to as the informant and advisor regarding the innovation in question (Rogers, 2003). Early majority and late majority are the two following categories which constitute the majority of adopters. The decision-making

process often takes more time than for innovators and early adopters as they are more deliberate and skeptical of innovations (Rogers, 2003). The last category consists of laggards, who are characterized as traditional and largely base their decisions on past experiences and are hesitant towards innovation (Matzler et al., 2013; Rogers, 2003; Triguero et al., 2016).

Laggards were largely overlooked by academics and practitioners as their resistance to change leads managers to consider them as having limited or no market potential (Goldenberg & Oreg, 2007; Matzler et al., 2013). However, research showed that laggards can provide valuable market insights as they can point towards weaknesses of the innovation and steer the firms to focus on the relevant issues (Jahanmir & Lages, 2015). Products or services may require a significant financial and time investment to implement and require companies to adapt their infrastructure and capabilities. Laggards might perceive those innovations as *'over-engineered'* and thus resist adoption (Jahanmir & Lages, 2015; Matzler et al., 2013). Ultimately, laggards embrace innovation, but only if it is considered valuable and fulfills their business needs, which means laggards are more critical in evaluating a product or service and adopt more rarely (Goldenberg & Oreg, 2007; Jahanmir & Lages, 2015; Matzler et al., 2013). Thus, laggards are likely to suspend early versions of a technology until the latest upgraded version is available on the market, which is referred to as the *'leapfrogging effect'* (Goldenberg & Oreg, 2007).

2.3.2 Crossing the chasm

As innovations, like technologies, gain traction in the market and the number of adopters rises the uncertainty decreases, which increases the likelihood of further companies implementing the technology (Leiby, 2018; Rogers, 2003). However, the diffusion into the wider market is not a given, as a successful adoption requires the crossing of the so-called chasm (Moore, 2014). The chasm occurs after the innovators and early adopters have implemented the innovation, but it has not yet spread to the majority users, therefore, a mainstream market has not yet been established (Moore, 2014; Tang et al., 2023). Reasons for diffusion stagnation can differ but in terms of digital innovations often result from low technological readiness, which is characterized by awareness and knowledge gaps as well as lack of resources (Tang et al., 2023). Being able to cross the chasm determines whether an innovation will be accepted and integrated in the market or not (Moore, 2014; Van Looy, 2021).

2.3.3 Attributes of innovation

Innovations are adopted at different rates depending on, among other components, five attributes of innovation:

Relative advantage. This attribute measures to what extent an innovation is considered superior compared to the one it replaces (Altinkemer et al., 2011; Rogers, 2003). Relative advantage is expressed by social factors, such as status, or economic factors. Economic superiority is determined by a cost-benefit analysis and is positively impacted by high profitability, low initial investment, time savings, and rapid ROI (Rogers, 2003; Venkatesh & Bala, 2012). Communicating the relative advantage of an innovation reduces the uncertainty and as such "innovation information among peers lies at the heart of the diffusion process" (Rogers, 2003, p.233).

Compatibility. An innovation needs to be embedded in an organization's beliefs, infrastructure, and process landscape. Compatibility is determined around social values, previous ideas, and the company's needs. Increased compatibility reduces the risk that the innovation will be implemented in a way that does not fit the company and business needs (Rogers, 2003). When technological innovations require new resources and capabilities, the adopter must invest in these before the technology is compatible with the organization, which typically slows the adoption rate (McElheran, 2015).

Complexity. Complexity involves the perceived difficulty of understanding and adopting the innovation in question and can present a barrier in the diffusion process (Rogers, 2003).

Trialability. The adoption rate is positively related to the opportunity to adopt the innovation on a trial basis before having to commit to the full investment. This allows companies to overcome their initial concern by observing how the innovation can be embedded within their given environment (Rogers, 2003).

Observability. If the results of implementing an innovation can be observed and communicated to third parties easily, the rate of adoption will most likely increase (Rogers, 2003).

2.3.4 Change Agents

Change agents, who have an in-depth understanding of the innovation, influence the decision making and adoption process. First, they establish and draw attention to the need for change by proposing the innovation as a solution to the client's problems. This requires detailed knowledge of the business needs and change management to create the willingness and motivation to engage in change and invest in the innovation (Rogers, 2003). This is enabled by serving as an intermediary between the client and resource system and by building a

trusted relationship due to being viewed as credible and competent advisors. The change agent's role is to transform the initial intent to change into actively engaging in transformation. This includes embedding new behavior and processes within the client's organization and stabilizing the new normal (Rogers, 2003). Lastly, it is the agent's responsibility of "developing the client's ability to be their own change agents" (Rogers, 2003, p.369) and as such being reliant on themselves instead of third parties. Change agents play a relevant role in the diffusion of innovation, especially when diffusion chasms occur. Consulting firms can inherit this role and their success is reliant on their efforts to enable change, their ability to empathize with the client's needs, and their client orientation (Rogers, 2003).

2.4 Consulting firms

Consultancies are considered to be knowledge-intensive firms (Hu et al., 2019; Mosonyi et al., 2020). Consultants gain their expertise through extensive education, practical experience, and interaction with various companies (Barthélemy, 2017; Williams & Van Triest, 2023). Therefore, the gap between theory and practice can be bridged by consultants as they provide knowledge to their clients (Barthélemy, 2017; Laaraj et al., 2022; Reid et al., 2019). Those outside perspectives and best practices enable new ways of working and innovation for their clients (Laaraj et al., 2022; Mosonyi et al., 2020; Reid et al., 2019). Best practices are techniques which are commonly used and accepted to lead to the best possible results (Barthélemy, 2017). However, two limiting factors of their effectiveness have been identified. On the one hand, consulting services cannot be standardized and client as well as industry specific adjustments have to be made. On the other hand, best practices are less unique than individually created solutions and are consequently more unlikely to lead to extreme relative performance increases (Barthélemy, 2017; Reid et al., 2019). While best practices are not necessarily unique, not every company that is aware of them is committed to their realization. Therefore, the implementation is rarer and as such provides an advantage to those who do implement best practices (Barthélemy, 2017).

2.4.1 Roles of consultants

The *VRIO framework* first introduced by Jay Barney suggests that superior firm performance can be achieved by having resources that are valuable, rare, inimitable, and organized (Barney, 1991). Past developments have shown that one essential element is the effective management of those resources (Bruhn et al., 2018; Wamba & Queiroz, 2022). Management abilities are positively related to resource productivity and if not existent can present a

constraint in achieving companies' growth (Barthélemy, 2017; Bruhn et al., 2018). Those management capabilities, if not internally generated, can be purchased externally through consulting services (Barthélemy, 2017; Hu et al., 2019). Consulting firm are hired as experts, advisors, additional resources and change agents:

Experts. Consulting services are centered around knowledge (Back et al., 2014; Mosonyi et al., 2020; Radnor & O'Mahoney, 2013). Consultants possess expertise and skills that many firms either do not have or do not know how to apply (Back et al., 2014; Reid et al., 2019). When defining knowledge, two views have to be differentiated. On the one hand, the perception that knowledge is transferable and exchangeable results in knowledge being treated as an asset. On the other hand, the social perspective includes that gaining knowledge is a process (Mosonyi et al., 2020). Combining both perspectives, it can be concluded that consultants interact with their clients and implement processes to transfer knowledge to them by upskilling employees and raising awareness. Especially in fast changing environments, diffusion of knowledge is essential (Hu et al., 2019; Laaraj et al., 2022; Mosonyi et al., 2020; Williams & Van Triest, 2023).

Advisor. Consultants have the unique advantage of providing an outside-in-perspective while still possessing sufficient knowledge regarding the market conditions and the company's role to provide valuable insights (Back et al., 2014; McElheran, 2015; Reid et al., 2019). This allows consultants to identify and analyze their client's business needs (Back et al., 2014; Williams & Van Triest, 2023). Consultants' recommendations are more likely to be accepted by external parties as consultants remain independent and provide confidence and legitimacy (Back et al., 2014; Reid et al., 2019).

Additional resource. Many companies are confronted with a shortage of skilled employees, which becomes especially evident when dealing with tight project deadlines while still having to cover the day-to-day business. Therefore, hiring external consultants as additional resources can be beneficial, as they are known for their high pace and quality of their work (Back et al., 2014; Reid et al., 2019). Furthermore, consultants can achieve time savings by minimizing test phases, which would be necessary without having the consultants experience and expertise (Reid et al., 2019).

Change Agents. Consultants are known to first analyze and question the initial setting and second to provide innovative ideas and solutions. Lastly, they can support implementing those changes and often facilitate change processes and achieve acceptance (Back et al., 2014;

Galwa & Vogel, 2023; Wright et al., 2012). Especially as the emerging digital environment inherits significant strategic implications and requires organizational change, the fostering, scattering, and encouraging of new ideas is elemental (Radnor & O'Mahoney, 2013; Wright et al., 2012). Within technological innovation, consultants are often referred to as *'technology brokers'* as they function as the mediator between multiple parties and enable adoption and implementation (Laaraj et al., 2022; Wright et al., 2012).

Even though consultants inherit different roles within their clients' organizations, a consistent outcome of consulting services should be increased performance. Performance increases can be achieved by revenue growth or cost reduction (Barthélemy, 2017; Radnor & O'Mahoney, 2013). Reduced costs can be attained by productivity gains, improved organizational processes, and quality improvements (Barthélemy, 2017; Bruhn et al., 2018¸ Laaraj et al., 2022).

2.4.2 Challenges of consulting Firms

Consulting services, especially from prestigious consultancies, are costly and as such companies need to have sufficient budget allocated to their services (Barthélemy, 2017; McElheran, 2015). Additionally, although consultants have been recognized as additional resources to a company, it should not be neglected that consultants require input and feedback from employees, which ties up internal resources as well (McElheran, 2015). Furthermore, some companies prefer to rely on knowledge that is internally generated compared to best practices (Barthélemy, 2017). Internal knowledge has the advantage of being unique and tailored to the company and therefore having the potential to lead to superior firm performance. However, compared to best practice solutions, which have already proven successful, individual solutions require iterative development and extensive test phases (Barthélemy, 2017).

2.5 Thesis relevance & research gap

Companies are exposed to constantly changing environments, which are characterized by intensified competition, digital disruption, and fast-moving circumstances. This results in rising interest in DT and a shifted focus to digital strategies and technologies (Angelopoulos et al., 2023; Firk et al., 2021; Hanelt et al., 2021; Verhoef et al., 2021). As such, top management is confronted with the challenge of including digital in their corporate and business strategy (Firk et al., 2021; Hanelt et al., 2021; Leinwand & Mani, 2021). To help with the development of such strategy, consultants are often hired to support that process, which is underlined by the fact that 20% of consulting services relate to corporate strategy

(Graefe, 2023). The remaining major consulting practice areas in Europe were information technology [24%] and process management [21%] (Graefe, 2023). This emphasizes the relevance of consultants in RPA projects, as software bots relate to these consulting fields. The importance of RPA in today's technology stack is illustrated by its software market growth to $2.8 billion in 2022 with a growth rate almost twice as high as the global software market (Metha et al., 2023).

Academics and practitioners have recognized the importance of process automation. However, research shows that almost half of the companies have not yet implemented RPA and only 4% of surveyed companies have met their scaling potential (Horton et al., 2018; PwC, 2020). Consequently, this study addresses the paradox of the rising relevance of RPA and largely acknowledged benefits in contrast to its low adoption rates. By answering the research questions '*What factors influence the diffusion and implementation of RPA?'* and '*How do consulting firms influence the implementation and adoption of RPA?'* the study will focus on benefits and challenges of RPA, success factors during the implementation and adoption, and the influence of consulting firms within RPA projects. By conducting a literature review and semi-structured interviews with consultants the researcher aims to unite the practical relevance and academic orientation, a gap that is often overlooked (Laaraj et al., 2022).

3 Methods

Commonly known research methods include quantitative, qualitative, or mixed methods (Mulisa, 2022). This research adopts qualitative research for three main reasons. First, emerging digital technologies require in-depth understanding to analyze its multifaceted impact and perspectives (Birkinshaw et al., 2011; Mulisa, 2022). As RPA projects may differ depending on the industry, company, and processes, it is crucial to understand the context in which the implementation takes place. Qualitative research methods are considered appropriate for new or complex environments where it is relevant to gain insights into the context (Mulisa, 2022; Bansal et al., 2018). Second, interviews can provide insights to relate cause and effect and are especially important in understanding the process of a phenomenon instead of solely focusing on the outcome (Mulisa, 2022; Pettigrew, 2013). As such qualitative research allows for analyzing the mechanisms and causal relationships of both the drivers of success and adoption barriers of RPA. As this study aims to understand the tension between the lack of adopters and the benefits of RPA, it is crucial to deeply understand and contextualize the diffusion process. Third, digitalization and automation are fast-changing

processes that have not been fully researched yet. Therefore, the exploratory nature of qualitative research allows to generate new insights into RPA that might enhance or contradict the existing literature (Mulisa, 2022; Bansal et al., 2018).

Overall, qualitative research methods with a focus on collecting primary data with interviews are deemed appropriate for this study as they are strongly linked to the research objectives. This type of method allows the researcher to acquire in-depth understanding of perspectives and context of RPA, the diffusion process, and the role of consultants.

3.1 Sample strategy

The sample was chosen using a non-probability sampling method, applying purposive and convenience sampling strategies. Purposive, also known as judgmental, sampling relies on the selection process and judgement of the researcher to determine adequate interview participants (Vehovar et al., 2016). The selection was based on three criteria:

1) Interviewee has worked for a consulting firm for at least two years.
2) Interviewee has in-depth understanding of digitalization and automation.
3) Interviewee has been involved in at least three RPA projects within the last two years.

Furthermore, the convenience sampling method entails that interview participants are chosen based on availability and accessibility (Vehovar et al., 2016). The limited time frame and resources required the researcher to make use of her professional network and professional social platforms, like LinkedIn, to identify potential interview participants based on the above-mentioned criteria. 76 potential interviewees were contacted via LinkedIn and twelve via the professional network of the researcher. These efforts resulted in a sample size of 17 consultants with expertise in RPA, identified in Appendix 1. To obtain a wide range of perspectives and practical experiences, consultants at different career stages from various consulting firms of different sizes and scopes were chosen.

3.2 Data collection method

Qualitative data was collected through semi-structured interviews to gain in-depth understanding of the success factors and challenges in RPA implementation and to determine the role of consulting firms. The interviews were conducted via online video conferencing tools, like Zoom or Microsoft Teams. The use of such platforms enables personalized interaction and a trusted environment while staying efficient and overcoming geographic boundaries. The duration of each interview was between 35 and 75 minutes to ensure a

detailed understanding of the interviewee's perception and experience. Each interview was recorded and transcribed (Appendix 3).

Interviews followed a guideline (Appendix 2), which included a standard set of questions, covering the following topics: Introduction, consultants' role in RPA implementation, success parameters in RPA implementation, challenges in RPA implementation, and outlook and closing. The interview guide solely included open ended, non-leading questions to enable in-depth analysis and encourage the interviewees to share their insights and ideas (Gioia et al., 2013). The elaborated guideline enables comparable responses and ensures that the investigative interviews aim towards answering the defined research questions. The interview protocol could be enhanced, if necessary, to include concepts and mechanisms that might emerge throughout the interview series (Gioia et al., 2013).

3.3 Data analysis

The data analysis was based on Gioia's methodology for qualitative content analysis. The aim of the analysis is to establish concepts which provide answers to the research questions previously defined, namely the diffusion of RPA and the impact of consulting companies. Gioia's methodology establishes a foundation to gain deeper understanding of the companies' dynamics and organization. The key to this data analysis method is to first base all findings on the interviewees' insights and then relate them to theory derived in the literature research (Gioia, 2021¸ Magnani & Gioia, 2023). Therefore, it is classified as *'interpretive research,'* as the interviewees perceptions and interpretations are guiding the research (Gioia, 2021).

First, the data is structured and most intriguing findings are extracted from the transcripts and derived as first order concepts. This gathering of information is informant-based, as the interviewees' original wording is kept (Gioia, 2021; Gioia et al., 2013; Magnani & Gioia, 2023). Categorizing those concepts enables the researcher to identify similarities and differences in the interviewee's experiences and perspectives. Throughout the second order analysis, the number of categories are reduced by identifying emerging themes. This classification is researcher-based and allows a connection to priorly established theory findings (Galwa & Vogel, 2023; Gioia, 2021; Magnani & Gioia, 2023). The combination of concepts established from the interviews and theory merged from the literature review enables a more profound analysis (Galwa & Vogel, 2023; Gioia, 2021; Magnani & Gioia, 2023). The last step entails merging the identified themes into aggregated dimensions (Gioia et al., 2013). The purpose is to identify the interdependencies and relationships of those themes (Gioia et al., 2013; Magnani & Gioia, 2023).

A major challenge of this data analysis method is subjectivity and the risk that the researcher might unconsciously project her own or the interviewees' biases, which are not supported by the data. Therefore, it is crucial to obtain an outside-in-perspective to ensure basing findings on the evidence provided in the interviews, namely the direct quotes (Gioia et al., 2013; Mulisa, 2022). The researcher aims to minimize this risk by, on the one hand, being aware of the possible bias and, on the other hand, implementing multiple iterations for analyzing the interviews.

4 Findings

The qualitative content analysis reveals several key themes and dimensions emerging from 17 semi-structured interviews, which are structured in an organized table in Appendix 4. Figure 2 illustrates a condensed version of the analysis by visualizing and structuring the data in three hierarchical themes: First order concepts are represented by direct quotes from the interviewees as the amount of data allowed for a simpler structure. Several second order themes are identified and consolidated into five aggregated dimensions: RPA at a turning point of gaining momentum, main benefits of RPA, main concerns and challenges of adopting RPA, key success factors of RPA implementation and role of consultants in RPA projects. Each dimension represents relevant components in analyzing the diffusion of RPA as well as the consultant's role and will be further elaborated throughout this chapter.

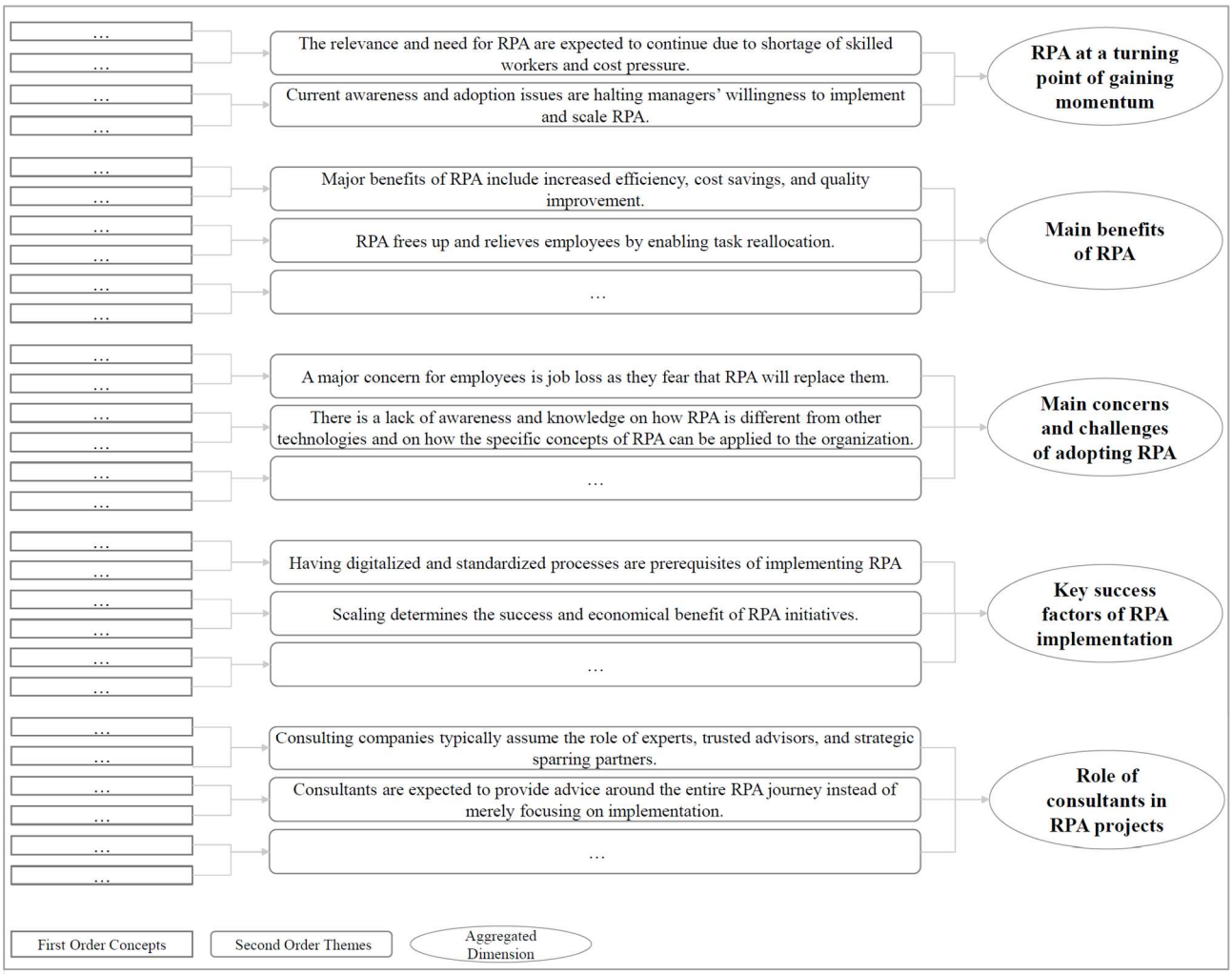

Figure 2: Overview of qualitative content analysis using Gioia's methodology
Source: Own illustration based on qualitative analysis using Gioia's methodology (2013).

4.1 RPA at a turning point of gaining momentum

While economic circumstances keep on emphasizing the benefits of implementing RPA at scale, decision makers are still reluctant in adopting the technology or implementing it at scale in their organizations. Interviewees increasingly recognize the challenge of companies being confronted with shortage of skilled workers. Many of their clients want to achieve growth without hiring new staff. Furthermore, companies are dealing with a tense economy characterized by high-cost pressure. These external drivers are fundamental in understanding the momentum of RPA and its relevance as "companies will increasingly struggle to become more efficient and digitize everything and minimize inefficiencies wherever possible" (JL). RPA can be viewed as a technological driver to overcome these external pressures as it automates repetitive tasks in a cost-efficient manner, thereby enhancing the efficiency and resilience of the firm. As such RPA is currently at a turning point of gaining momentum and being accepted as a long-term and beneficial technology.

However, current awareness and adoption issues are halting managers' willingness to implement and scale RPA. On the one hand, an awareness gap within the market has been identified as "there are still too many companies that have not yet familiarized themselves with RPA. This means that they either are not aware of RPA at all or, if they have heard of it, they don't understand what it is" (AM). Furthermore, companies may continue to "see RPA as a transitional and temporary solution" (JL) and avoid adoption. On the other hand, companies that have already engaged in RPA projects are making progress from a testing phase to scaling, which results in new challenges such as governance and establishing an automation pipeline. However, this leap forward requires overcoming a turning point otherwise "RPA will not bring the full added value and customers will not be convinced" (MK).

4.2 Main benefits of adopting RPA

Interviewees identified five key benefits related to the implementation of RPA. One of the most relevant advantages refers to an increased efficiency: RPA bots increase efficiency and realize cost savings as they conduct repetitive tasks quicker. As bots act based on clear rule sets, they operate more precisely and increase quality. To this point, "there are activities where quality is a prerequisite, but sometimes this cannot be achieved with the human resources available" (SS). Second, automating through RPA allows to "relieve people from work and shift their time to more qualified tasks" (JJ), in which human strengths such as creativity or empathy are required.

Third, in the past many manual tasks resulted from having a heterogenous application landscape that has not been fully integrated. "The best example is that some amounts have to be transferred from the invoice to SAP and from SAP to another web application. As the company does not yet have any interfaces between these system breaks, RPA usually intervenes" (JL) and transfers data from one system into another. As such, it simulates missing interfaces and bridges the system gaps. Therefore, as the IT infrastructure of companies remains scattered, RPA can greatly benefit those companies. Fourth, interviewees suggest that a complex solution is not always necessary. Companies are often "looking for quick and simple solutions" (TV) and as such benefit from RPA providing rapid relief due to the speed of implementation.

Finally, RPA logic can be learned rather quickly and then "digitalization and transformation are really fun. That's why enthusiasm is an important topic, which ultimately also has an impact on having motivated and satisfied employees" (MA). This positive association with digitalization technology can have scaling and spillover effects as companies "will probably

engage in more digital transformation projects, because they have already built trust in new technologies" (MKC).

4.3 Main concerns and challenges of adopting RPA

Despite the identified benefits, evidence suggest that several challenges are preventing companies from further adopting RPA. First, consultants identify an awareness and knowledge gap, which results in companies neither knowing about RPA, nor being able to understand the technology and the opportunities it raises for their companies. One major reason is that the market is filled with buzzwords concerning automation and digitalization. Due to the overflow of information and speed of technologies emerging in the market, many companies "don't actually know what they [software bots] are and associate everything with them" (SS). Therefore, a significant challenge is to understand the concepts and functionalities of RPA, differentiate them from other technologies, and apply those to the company and their business challenges. Additionally, RPA is not a standard software that can be installed and used. It is rather "a digital service that works in the background on a server" (JJ) and can be customized according to the companies' needs. Consultants recognize that many companies are missing the expertise to classify RPA correctly and understand the capabilities. The lack of expertise leads to either needing to hire experts or results in not implementing RPA at all.

Second, a main concern of adopting RPA is the necessary budget as implementation costs arise and licenses need to be purchased on a yearly basis. Consultants note that budgets are typically planned very tightly or have already been allocated "in the previous year, when the RPA projects may not even have been planned" (JL). Third, software bots will run on the company's infrastructure and application and will most likely process company data. For this reason, decision makers and end users are concerned with data privacy and security.

Fourth, a lack of trust and even fear of RPA can significantly obstruct the acceptance of RPA. On the one hand the "fear that employees will be laid off after a successful RPA implementation" (RP) can lead to employees not engaging and supporting the implementation project. Embedding the perspective that "RPA is not there to replace employees but to relieve them" (SS) is crucial for integrating software bots in the workplace. On the other hand, hesitancy relates to not trusting the capabilities of RPA. This includes functional departments often "question[ing] whether a robot that has been configured once can really perform the task as well as a conscientious employee" (LS) and IT departments initially not considering RPA to be a long-term stable solution. Addressing and overcoming those concerns is of critical

importance if clients wish to embed software bots as a relevant and value-adding technology in their functional departments.

Fifth, a common misconception that companies have when thinking about RPA is that it is a *'Set and forget'* technology and that "everything runs automatically from day one" (JB). However, RPA is not a fully automated solution and is dependent on the stability of the IT infrastructure and applications. Thus, maintaining and upkeeping presents a challenge for companies. Simultaneously, consultants recognize that this resource investment often is neglected throughout the decision making and implementation process as companies assume that software bots will run smoothly all the time.

Finally, adopters seem to have high expectations of RPA and often believe that "I'll install RPA and suddenly I'll have a technical assistant that does everything for me" (MS). While software bots can provide business benefits by driving efficiency and quality "RPA is […] sometimes oversimplified, over glorified and/or overpromised" (AMA) as it is not a panacea that solves all business problems. As such, evidence suggests that expectation management is a challenge that has to be overcome.

4.4 Key success factors of RPA implementation

The findings suggest that there are several success factors that are determinant in implementing RPA, which have been split in ten categories: First, evidence points to the importance of defining a target picture for digitalization and automation prior to implementation. This vision should be completed with a roadmap of how the company can achieve the next level of digitalization and the objectives of such automation projects. "To understand the why behind it" (JL) enables companies as well as consultants to determine the most appropriate technology for the business needs. Additionally, interviewees highlight the importance for the company to have the right understanding of how RPA can help meet the defined objective. With that understanding, the technology can provide long-term benefits and "drive forward this end-to-end idea in process automation" (AG).

Second, interviewees suggest that managers would benefit from considering RPA a strategic measure instead of solely providing temporary operational relief. A strategic integration of software bots enables "individual technologies and platforms […] to merge into a holistic digital ecosystem" (TV) and embeds them in a comprehensive transformation perspective. Third, interviewees point out that successfully adopting RPA requires embedding the technology as an integral part in the holistic DT journey of companies. Within this transformation, software bots can inherit different roles. RPA is seen as the enabler and "basic

building block" (MA). Interview participants metaphorically compare RPA to assembly line workers: while other technologies and employees provide business decisions, concepts, data and software bots assemble everything into an end-to-end picture, enabling a comprehensive transformation. In addition, RPA is also seen to facilitate and accelerate digitalization and ultimately DT. Especially in the context of other transformation projects, such as SAP S4HANA transformation, RPA can simplify these initiatives by automating repetitive and error-prone configurations.

Fourth, a process-centric approach and thereby focusing on the organizational and processual aspects is essential as "the technology must fit the use cases and not the other way around" (MW). In contrast, focusing on the technological aspect of RPA raises the likelihood of seeing "the technology as a silo" (AC). This is perceived as a common pitfall as companies "need this sensitivity between technology, processes and the company" (MA). Having the ability to precisely define the business process with the necessary granularity and all business exceptions is the denominator for configuring dependable software bots. Many business processes are not ready to be automated as "the harmonization and standardization of such processes is the basis for being able to automate" (AG). Therefore, "RPA projects are process consulting projects" (MK) and identifying automatable processes is a key task.

Fifth, a successful interaction between humans and software bots is essential to enable efficient and stable end-to-end processes. The process landscape often does not allow for end-to-end automation, and as such, many companies are "doing *robotic task automation*, because only parts of the processes are automated with RPA" (AC). Consequently, the human and the bot are working on the same applications and user interfaces, which requires established collaboration models. In addition to encouraging the employees to interact and collaborate with the software bots, evidence points to the importance of enabling and upskilling employees to "continue their [RPA] program successfully" (TV).

Sixth, interviewees highlight the importance that the company has to be "able to implement an automation pipeline […] and is continuously able to identify new automation potential" (MA). Larger numbers of use cases being automated enables profitability and increases the ROI. However, companies are now noticing that scaling is resource and time intensive and therefore it is "a key driver or showstopper of an RPA initiative" (MK). Seventh, consultants point out that RPA can be enhanced by integrating AI and other emerging technologies to expand the range of use cases that can be automated. Currently, a significant technological restriction is the need for structured data and a predefined rule set to enable RPA automation.

These technical prerequisites limit the number of automatable use cases and create an overall restriction for the automation pipeline. By enhancing RPA with further technologies, such as AI, software bots will “become more intelligent” (LS) by, for instance, structuring data or stimulating certain human decisions. This potential would allow for automating more complex use cases. A combination of technologies enables companies “to digitize end-to-end processes and then really have a strategic impact” (TV). This refers to, as priorly mentioned, technologies merging into a holistic digital ecosystem and enabling DT.

Eighth, expectation management through acknowledging what RPA can do and what it cannot do has been identified as key to sustainably ensure acceptance within the companies. This includes “transparency up front by pointing out what the potential is and making transparent what it is not. It's really important to be fair and not to exaggerate” (PD). Thus, consultants should build a fair and balanced relationship with the customer and the client has a realistic understanding of RPA and its implementation and adoption.

Ninth, evidence suggests communication to be one key success factor in RPA projects. One strategy entails consultants sharing success stories that serve as a role model. Such stories can be from other comparable companies that have already implemented software bots or from the company's own proof of concept phase, which allows the company to familiarize itself with the technology and convince them of its benefits using an individual use case. The other strategy with prospects of success entails internal communication channels and peer recommendations to raise awareness within the company. “The fact that the employees support the project are the biggest speakers you can have” (MA) highlights the importance of employees supporting the RPA project and being involved as collaboration and insights are necessary to build a reliable software bot.

Finally, RPA projects are claimed to be more successful if there is C-Level support and a sponsor, as employees are typically not involved in the decision-making process and are not able to allocate budgets. The upper management has the possibility to embed RPA within a companywide automation initiative. “This is incredibly valuable because RPA in particular tends to quickly impact many different business areas” (AM) and as such this ensures that an authority figure with the necessary budget can drive the project and provide sustainability.

4.5 Role of consultants in RPA projects

Evidence suggest that consultants play a significant role in influencing RPA adoption and implementation. Consultants play the role of experts, trusted advisors, and strategic sparing

partners. Their expertise is often needed as knowledge within the client's organization is missing, or because companies seek professional advice to determine a roadmap that best fits their needs as the emergence of new technologies broadens their possibilities. These circumstances often leads to companies "want[ing] to have a structured approach […] and look[ing] for experts who have already dealt with and precisely managed these issues" (TV). Additionally, interviewees suggest that consulting firms are expected to "represent the entire journey of RPA" (MA), which implies that their role extends beyond mere implementation. Consultants' role is often found to include strategic alignment, business analysis, implementation, employee enablement as well as maintenance and scaling. Moreover, change management is typically seen as an integral part of the consulting services when implementing RPA and it has proven to be "very valuable to consider appropriate change management right from the start" (AG). Furthermore, while the technologies evolve and the project scope has enlarged by governance and scaling topics, the role of consulting firms within RPA projects has remained constant over the past years. Finally, the need to stay up to date with market trends and technological developments to provide relevant consultation and advice to their clients and to establish the best possible solution is recognized. This requires "independent advice, independent of the [consulting] company's own product, which considers what benefits the company as a whole" (PD).

5 Discussion

This study analyzes the factors that influence the adoption and diffusion of RPA and how consultants impact this process. The findings of the interview series not only confirm extant literature but also provide relevant academic contributions and managerial implications, as new insights regarding the diffusion process were identified.

5.1 Theoretical and managerial contributions

Identifying use cases and benefits of RPA has already been intensively researched, resulting in a well-developed state of the literature. This study largely confirms previous academic findings regarding the benefits of adopting RPA, such as increased quality and efficiency as well as cost savings from automated processes or process steps (Bode et al., 2022; Didion et al., 2019; Flechsig et al., 2022; Shelton & Wegener, 2023; Verhoef et a., 2021). Implementing automation technology frees up time of employees for more meaningful tasks. Furthermore, RPA is a low code technology that is perceived to be user-friendly, which can excite and inspire employees. These benefits support literature findings of increased employee satisfaction (Flechsig et al., 2022; Lacity & Willcock, 2016; Shelton & Wegener, 2023). Short

implementation periods and rapid adoption is also a benefit of implementing RPA that has been identified by interviewees and academics alike (Didion, et al., 2019; Flechsig et al., 2022). This study additionally uncovers the relevance of software bots as a bridging technology to simulate interfaces, which has been less explored in prior research. This is a crucial advantage as companies will continue to have heterogeneous application landscapes.

Regarding challenges and concerns preventing companies from further adopting RPA, organizational barriers addressed in literature largely revolve around knowledge deficits, fear of costly implementations, fear of job loss, and scalability (Edlich & Sohoni, 2017; Horton et al., 2018; PwC, 2020; Spring et al., 2022). Interviewed consultants have confirmed these concerns. Evidence from both this research and existing literature show that fear of job loss is largely a misconception as RPA cannot fully replace humans but instead supports them (Sampson, 2021; Spring et al., 2022; PwC, 2020). This study advances new knowledge by revealing that there is a misconception that RPA is a *Set and Forget* technology, while the maintenance and upkeep of software bots is a significant challenge. This insight holds important managerial implications, suggesting that managers need to incorporate human resources and time investments for maintenance into their decision making and resource planning.

While external factors like shortage of skilled workers and cost pressure keep driving the relevance and importance of RPA, literature does not yet find plausible arguments to justify why almost 50% of surveyed companies have not yet adopted RPA and only 4% have met their scaling potential (Horton et al., 2018; PwC, 2020). Based on the evidence collected and using the lens of the diffusion of innovation theory, this study argues that reconciling the facts could point to RPA adoption facing a diffusion chasm. Indeed, the interviews conducted in this study point to this critical stage, as interviewees recognize RPA at a turning point of gaining traction and acceptance in the market. The awareness gap and difficulty to separate RPA from other technologies are identified challenges that hinder companies to comprehend what software bots can do for them and therefore decelerates adoption. This is consistent with the literature on the diffusion of innovation, in which low technological readiness, namely lack of awareness, knowledge, and resources, is identified as one reason for diffusion chasms to occur (Tang et al., 2023). Crossing the diffusion chasm is a prerequisite for generating acceptance and integration of the technology in the market (Van Looy, 2021). Figure 3 visualizes the findings of this study by highlighting the theoretical and managerial

contribution of how companies can cross the chasm by applying the identified success factors and using consulting firms to facilitate this adoption process.

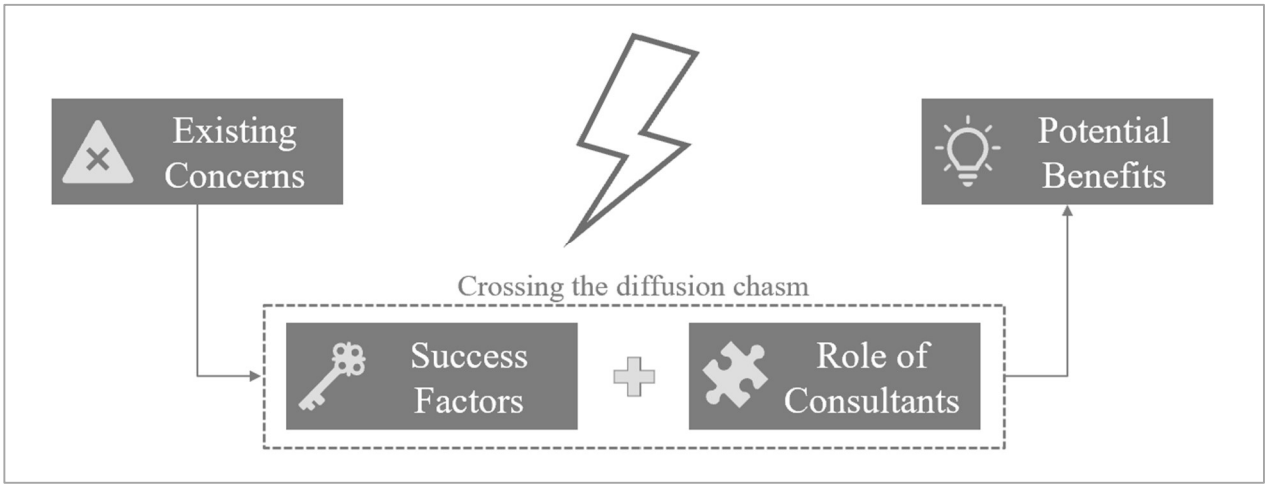

Figure 3: Crossing the RPA adoption chasm
Source: Own illustration based on interview findings.

This study largely confirms existing literature on the role of consultants as they can positively influence the implementation and adoption of RPA and as such play an important role to cross the chasm. Prior research has identified different roles that can be inherited by consulting firms. Their knowledge intensity allows them to serve as experts, advisors, and additional resources (Back et al., 2014; Hu et a., 2019; Mosonyi et al., 2020; Reid et al., 2019). This interview series shows that consultants play the role of experts, trusted advisors, and strategic sparring partners, which confirms theoretical findings. Additionally, this study identifies that change management is a relevant task that consultants should perform within RPA projects. This evidence aligns with prior research that consultants can serve as change agents as they play a relevant role in overcoming the occurrence of diffusion chasms (Rogers, 2003). However, the occupation of change agents by external partners is intended to be temporary, as customers should be enabled to drive their own change process internally (Rogers, 2003). This confirms findings of this study as employee enablement has been identified as crucial to further drive RPA initiatives. Contributing to the literature, this study found that while consultants see their role as being rather constant over the past years, they also acknowledge that with fast-changing environments and emerging technologies it is crucial for them to stay up to date to provide relevant and time-appropriate advice. Furthermore, evidence suggests that successful consulting services should provide unbiased and holistic advice by covering the whole RPA journey, from business analysis to maintenance instead of only focusing on implementation.

In addition to leveraging consultants as facilitators, this study identifies key success factors to drive RPA diffusion and cross the chasm. They have been grouped in five distinct categories:

Strategic Integration. Evidence points to the need to define a target picture prior to the RPA project and a mutual understanding of the adoption reasons has to be established. Additionally, RPA should be embedded in a digital ecosystem that drives and enables a holistic DT. These findings are largely aligned with literature as digitalization is considered to be one of the drivers and prerequisites of DT (Dhasarathy et al., 2022; Verhoef et al., 2021). As many companies are not yet digitally transformed, they need to focus on digitalization first, therefore RPA is an essential component. Furthermore, digital should be incorporated in a company's strategy (Firk et al., 2021; Hanelt et al., 2021; Leinwand & Mani, 2021; Verhoef et al. 2021), which is confirmed by this study as consultants advise to adopt RPA as a long-term strategic measure to drive automation, digitalization, and ultimately DT.

Transparent communication. Expanding the current knowledge, interviewees have identified communication as a key success factor in driving RPA diffusion. First, this includes consultants being transparent about the benefits and challenges of software bots in advance to avoid information asymmetry and establish a factual basis for decision making. Second, consultants should not only focus on decision-makers but also on employees. Communication helps companies understand the functionalities of RPA and to learn how software bots will impact their work. Showing what their day-to-day tasks will look like after RPA implementation and emphasizing that consultants and software bots are there to assist the employees will help build trust and acceptance. This can be further enhanced by sharing success stories of RPA, which reduces uncertainty, demonstrates applicability and compatibility, and creates confidence by showing concrete examples.

Organizational Integration. RPA needs to be integrated within the organization. First, employees need to collaborate on the projects and be enabled to maintain the software bots and drive RPA initiatives on their own, without fully relying on external support such as consultants. This aligns with prior research, where diffusion of knowledge and upskilling were identified as crucial components in fast changing environments (Hu et al., 2019; Laaraj et al., 2022; Mosonyi et al., 2020). Second, contributing to the literature, C-level support and having a sponsor throughout RPA implementation has been identified as a significant success factor. The importance of integrating RPA into the organization has important managerial implications, as a companywide approach is recommended that addresses both operational and executive levels. As such, this integrated approach requires the C-level to provide

direction and guidance, while operational levels drive the practical implementation within the company.

Process focus. This study indicates that implementing RPA requires significant preparation and pre-existing data and process structures. Prerequisites of dependable software bots are digitized and standardized processes that rely on structured data. Therefore, consultants advise on the one hand to inherit a business focus instead of a technology focus to choose a technology that fits business needs. On the other hand, they recommend that a thorough process analysis is conducted prior to implementation to ensure that the automation of the chosen process or process step is feasible and beneficial. These findings partly contradict prior literature findings. While the necessity of data structure and process descriptions are acknowledged in literature, process structuring and harmonization have largely been framed as a benefit of RPA, whereas consultants identified it as a prerequisite (Bode et al., 2022; Flechsig et al., 2022; Grönke & Wenning, 2021; PwC 2020). While it is true that RPA projects lead to partly or fully automated structured processes, these benefits are ensured by preparatory and follow-up work and not the technology itself. In addition to contributing to literature, these findings hold significant managerial implications as companies need to evaluate their processes before engaging in RPA and consultants should offer process harmonization and structuring services prior to implementation projects.

Application Enhancement. Past research states that with the implementation of RPA high ROIs can be achieved within the first year (Lacity & Willbrocks, 2016; McKinsey & Company, 2017). However, this is partly restricted by the findings of the conducted interview series, as the ROI largely depends on the number of use cases implemented. Individual use cases do not usually cover the implementation and license costs. Scaling has been identified as an important success factor. This finding is underlined by literature as conducted survey state that as of 2018 only 4% of surveyed companies had achieved their full scaling potential (Horton et al., 2018). The current application scope of RPA is limited to structured data that follows a clear set of rules (Flechsig et al., 2022; Lacity & Willcocks, 2016), which was also confirmed in the conducted interviews. Therefore, consultants see the development potential of RPA in linking it with other technologies such as AI to enable greater automation potential, which refers to the priorly mentioned digital ecosystem. This trend is confirmed by literature (Angelopoulos et al., 2023) and can also be observed in the market, as major players like SAP are acquiring process automation solutions and RPA platforms such as UiPath expand their technology portfolio.

Overall, this study contributes to the RPA literature by identifying and detailing how to cross the RPA adoption chasm, namely determining key success factors and the role of consultants in facilitating this process. As the lens of the diffusion of innovation theory was used, these contributions align with Roger's attributes of innovation, which influence the adoption rate (Rogers, 2003): *Relative advantage* of RPA is further accelerated by application enhancement due to scalability and integration of technologies like AI. By strategically integrating RPA in a digital ecosystem, enabling organizational integration by ensuring support and collaboration, and adopting a process focus within RPA projects the *compatibility* can be enhanced. *Complexity*, which describes the perceived difficulty, is reduced by incorporating consultants as trusted advisors and change agents within RPA projects. Transparent communication enables companies to recognize the relevant benefits of RPA and therefore improves its *observability*. By recognizing and implementing the proposed success factors, managers can accelerate the RPA adoption within their companies. Similarly, consulting firms can adjust their service offerings and value propositions accordingly to facilitate implementation.

5.2 Limitations and further research

The conducted semi-structured interviews allow for high internal validity as the researcher developed an in-depth understanding of the context of RPA projects and factors that influence the diffusion of RPA. However, due to non-probabilistic sampling methods, generalizability of the research finding cannot be claimed (Dixon et al., 2016). Qualitative research methods are subject to occurring biases as interviewees might hold a certain prejudice towards RPA. As such, the potential bias of the researcher inheriting the consultant's prejudices was minimized by conducting an iterative analysis approach ensuring closeness to the evidence as much as possible (Gioia et al., 2013). However, both biases cannot fully be eliminated and might influence the findings. The results of this study can be complemented by quantitative research, which would increase external validity and objectivity of the findings.

The sample includes 17 consultants from nine different consulting firms whose roles range from Senior Consultant to Partner. While this heterogeneity enables different perspectives and insights on the diffusion of RPA and the roles of consultants, this interview series faces certain limitations. First, the number of interviewees was limited by time and resource constraints. As such, the theoretical saturation of results would benefit from further interviews. Second, this study is limited to the experiences of consultants and lacks a range of perspectives from other stakeholders, specifically from employees working at the companies

where RPA was implemented. Two interviewed consultants have also worked for companies that implemented RPA in the past, but the interview guide focused on the perspective of consultants. Consequently, future research could focus on interviewing other stakeholder groups and companies that have implemented or are implementing RPA to allow for a wider range of perspectives. Third, the geographical exposure is limited to Europe, consequently this study does not reflect potential impacts of other economies, political environments nor cultural differences. A geographical extension of the sample would allow to analyze macroeconomic factors that may influence the findings. Fourth, the range of perspectives could be further enhanced by gathering insights from failed RPA projects to identify common pitfalls. These insights were partly addressed in the interview series by the *'Do you know of any cases where companies have changed their strategy after implementing RPA? If so, why?'* question. However, a more narrowed sampling approach and targeted interview guide would be necessary to fully address this perspective.

Finally, RPA is a digital component in fast-changing environments and is additionally subject to enhancement by integrating other technologies like AI. Therefore, this study provides insights into the current state of RPA diffusion as of November 2023, as all interviews were conducted in this time frame. As such, the findings of this study may become less relevant as market trends change, technologies merge and new innovative technologies emerge. Furthermore, consulting firms are constantly evolving and are updating their service offerings. To reflect these changes and trends a longitudinal study could be conducted. This would allow researchers to observe RPA enhancement and diffusion over time to identify long-term effects. Furthermore, this type of study would enable an analysis of the effectiveness of the identified success factors to cross the diffusion chasm.

6 Conclusion

Companies today are faced with relevant decisions on transforming their processes and strategies using digital technologies. Despite the benefits of RPA, one of the tools that could drive DT by improving business process automation and efficiency, RPA's adoption is currently at a turning point. The literature review sheds light on the existing paradox of rising relevance of RPA and largely acknowledged benefits while observing a hindrance of adoption and scalability. This study tackles this research gap by adopting qualitative research methods based on 17 semi-structured interviews. The goal was to obtain in-depth knowledge of success parameters and challenges within RPA projects as well as understanding the respective role of consultants. A qualitative data analysis based on Gioia's method revealed

key findings, namely RPA being at a turning point of gaining momentum, main benefits and concerns of adopting RPA, key success factors for RPA implementation, and the role of consultants. This research holds significant theoretical contributions and managerial implications for how to cross the RPA diffusion chasm. Evidence suggests that RPA is not a panacea that replaces the human workforce and enables fully automated businesses. However, it has the potential to enhance a company's digitalization strategy and therefore drive its DT by automating business processes in a time efficient, cost reducing and quality increasing manner. As external economic factors are increasing the importance of efficiency and cost savings, RPA is at a turning point of gaining momentum. However, identified concerns hinder companies from achieving those benefits. These challenges mainly result from an awareness and knowledge gap regarding RPA, lacking acceptance and integration of software bots in the workplace, and significant maintenance efforts. Consequently, many companies have not yet implemented RPA nor met their scaling potential. Using the diffusion of innovation theory lens, evidence suggests that RPA adoption is facing a chasm, which has to be crossed to ensure widespread acceptance and integration of RPA in the market. Contributing to the literature, this study identifies key success factors for crossing the chasm and successfully implementing RPA. First, integrating RPA in a digital ecosystem and obtaining an end-to-end perspective to inherit a holistic DT strategy is an essential factor for driving a successful RPA adoption and scalation. Second, adopters should ensure that RPA is aligned with the company's strategy. Third, companies should have a process focus instead of a technology focus, since RPA requires preparatory work to ensure that the software bots fit the business' need. Fourth, transparent communication and integrating RPA in the organization are two relevant success factors. Finally, RPA gains significance as more use cases are automated via software bots which can be achieved by scaling efforts as well as combination with technology like AI to widen the application scope and enhance the intelligence of software bots. Consulting firms play a significant role in influencing the adoption of RPA and facilitating crossing the chasm. Interview series and literature findings suggest that as the play the role of experts, strategic sparring partners, and change agents as they are expected to provide independent and holistic advice and stay up to date to changing market trends and technology developments.

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8 Appendix 1: Interview Participants

Interview Participants			
#	**Identification**	**Position**	**Practice Area**
1	Interviewee AC	Process Automation	Robotic Process Automation
2	Interviewee AG	Manager	Intelligent Automation
3	Interviewee AM	Senior Consultant	Digital Strategy
4	Interviewee AMA	Head of Digitalization	Digitalization
5	Interviewee JB	Senior Consultant	Finance Transformation
6	Interviewee JL	Senior Consultant	Intelligent Automation
7	Interviewee JJ	Senior Consultant	Finance Innovation &
8	Interviewee LS	Senior Consultant	Data & Technology
9	Interviewee MK	Manager	Finance Performance & Strategy
10	Interviewee MKC	Senior Consultant	Automation & Data
11	Interviewee MA	Manager	Automation & Digitalization
12	Interviewee MS	Partner & Managing Director	Automation
13	Interviewee MW	Senior Consultant	Application Management Service
14	Interviewee PD	Senior Consultant	Information Technology
15	Interviewee RP	Senior Automation	Automation & Digitalization
16	Interviewee SS	Managing Consultant	Automation
17	Interviewee TV	Manager	Finance Transformation

9 Appendix 2: Semi-structured Interview Protocol

Initial Information

- Thank you for participating in my interview series and for taking time to share your experiences. I am Marisa Drinkmann, a second-year master student at Católica Lisbon studying International Management with Strategy & Consulting. My master thesis aims to analyze how RPA is diffused in the market, what challenges companies are facing, what success factors can be identified, and what role consultants play in RPA projects. The interview series will be conducted throughout the first two weeks of November and will be followed by thorough analysis to meet the submission deadline at the end of the year. If requested, I can certainly share my final results with you. Please be assured that everything you share will remain confidential as only sanitized data will be published. However, for the purpose of transcribing the interviews I would like to record our session. Afterwards, all recordings will be deleted. Do you agree with this?

Introduction

- Brief introduction of interviewee (data gathered by researcher)
- Could you briefly describe your experience in RPA projects and the role you played?

Consultants' role in RPA implementation

- What are the main reasons that your clients claim for implementing RPA projects? What stakeholders were involved in the decision-making process?
- In your experience as a consultant, do you know of any criteria or benchmarks that have led companies to decide against RPA?
- In the projects you have participated in, what was the role of the consulting firm? Has that role changed in any way?
- In your opinion, what would be the ideal role of the consulting firm in RPA projects?

Success parameters in RPA implementation

- How do you assess the level of client readiness for a successful RPA implementation, and what factors influence that readiness?
- In the projects you have been involved in, what have been the key success factors for a successful RPA implementation?

- How do companies measure the success of RPA implementation in the projects you have been involved in?

Challenges in RPA implementation

- From your experience, what challenges have customers typically faced in adopting and implementing RPA?
- What challenges did you as consultants typically face within RPA projects?
- In the projects you have participated in, have clients who are hesitant to adopt RPA expressed their concerns?
- In your consulting role, what strategies do you use to overcome resistance and challenges to RPA?
- Do you know of any cases where companies have changed their strategy after implementing RPA? If so, why?

Outlook & Closing

- Based on your professional experience, how would you relate RPA to digital transformation?
- What are your expectations for further developments and enhancements of RPA?
- Is there anything else you would like to share regarding challenges of RPA diffusion and implementation or the consultant's role?

10 Appendix 3: Interview Transcripts

Interview transcripts are available at:

Interview transcripts_Marisa Drinkmann_152122546.pdf

Due to page limitations, the transcripts could not be included in the appendix.

In case of access problems or other questions please contact s-mdrinkmann@ucp.pt

11 Appendix 4: Analysis of interview series based on Gioia's method

First Order Concepts ~ Direct Quotes	Second Order Themes	Aggregated Dimensions
Looking ahead to the coming years, where the economic situation will always be tense [...] companies will increasingly struggle to become more efficient and digitize everything and minimize inefficiencies wherever possible. (JL)	The relevance and need for RPA are expected to continue due to shortage of skilled workers and cost pressure.	**1. RPA at a turning point of gaining momentum**
The shortage of skilled workers is precisely the issue. You have the problem that there is simply no staff. Even if you want to hire new staff on the market, it's extremely difficult. (MW)		
They don't want to have to hire more staff. Companies are trying to automate repetitive activities using RPA. (MS)		
The reason for RPA implementation is usually the challenge for companies to overcome the shortage of skilled workers. (MA)		
In my view, the reasons for carrying out RPA projects are [...] the fact that companies recognize that skilled workers don't grow on trees. (AM)		
This means that when I look at issues on the market such as the shortage of skilled workers and high cost pressure in general, then driving digitalization forward is of course an extremely powerful lever. (AG)		
We will see a shift in the overall economic situation. I believe that cost savings will become increasingly relevant […]. These are external factors which, of course, are heating up a topic like automation. (AG)		
They see RPA as a transitional and temporary solution that is not stable. (JL)	Current awareness and adoption issues are halting managers' willingness to implement and scale RPA.	
But we are currently at a turning point, without scaling RPA within companies and achieving awareness within new companies, RPA will not achieve its potential. (MKC)		
This is also a shift that companies have to overcome in order to sustainably establish RPA in the market. Companies are moving away from 'I'll give it a try' to 'I've tried it, I want to scale it and now I have governance and maintenance issues'. (MS)		
Without this awareness in the company and without scaling, RPA will not bring the full added value and customers will not be convinced. This is often a showstopper for initiatives launched by customers. (MK)		
But there are still too many companies that have not yet familiarized themselves with RPA. This means that they either are not aware of RPA at all or, if they have heard of it, they don't understand what it is. (AM)		
The customer really needs to stay on top of RPA topics and think about how they can spread the topic throughout the company so that everyone knows we now have RPA. (JB)		
Suddenly, digitalization and transformation are really fun. That's why enthusiasm is an important topic, which ultimately also has an impact on having motivated and satisfied employees. Satisfied employees in turn lead to satisfied customers. (MA)	RPA enables digitalization that inspires and excites.	**2. Main benefits of RPA**
So, the learning curve is not so steep to really show and sell them something that works and they can get excited about. […] With that excitement, they will probably engage in more digital transformation projects, because they have already built trust in new technologies. (MKC)		
We usually use RPA where there are system breaks. The best example is that some amounts have to be transferred from the invoice to SAP and from SAP to another web application. As the company does not yet have any interfaces between these system breaks, RPA usually intervenes. (JL)	RPA is considered to be a bridging technology as	

Every company simply has an application landscape that is arbitrarily heterogeneous, there is not yet perfect integration, but RPA can solve this problem super-fast. (AG)	it serves as the bridge in between different systems and provides solutions to heterogenous IT landscapes.	
We need a patch because IT is too slow. We need some kind of technology to be able to simulate interfaces. (MS)		
They therefore need bridging technologies and […] I believe that RPA, or as we often call it today, intelligent automation, offers a very good solution here. (MA)		
We then don't need a fancy solution, but with RPA we can implement the whole thing quite quickly. (LS)	RPA can be implemented in a short time frame.	
RPA is of course incredibly fast to implement. (MW)		
The department was therefore looking for quick and simple solutions, which is why the decision for digitalization fell on the topic of low code and RPA. (TV)		
The charm of RPA is that we can build lightweight solutions relatively quickly, which in the best case can support the specialist department within weeks. (JL)		
I would like to free up my employees, but not in the sense that I want to reduce my workforce. (MS)	RPA frees up and relieves employees by enabling task reallocation.	
[It is important] that employees are informed that RPA is not there to replace employees but to relieve them. (SS)		
Ultimately, the aim is to achieve these efficiency gains through automation, so that employees can focus on other activities that are less repetitive and more relevant to human action. (JL)		
Within an automation solution, it is of course a very important aspect to say that we are trying to free up staff. (AG)		
By using RPA, we relieve people of work or shift their time to more qualified tasks. (JJ)		
Because with RPA we will simulate what the person is doing, but we will do it with more efficiency and higher quality. (AC)	Major benefits of RPA include increased efficiency, cost savings, and quality improvement.	
Perhaps to summarize the motivations, they are inefficiencies, cost savings and quality improvements. (MA)		
RPA is definitely a very important factor, especially in terms of business value, cost savings, efficiencies and quality combined with process reliability. (LS)		
Mostly because with RPA many companies associate saving money and saving time. But it is not only about money and saving time, it's also accuracy. (AMA)		
This means, of course, that there is often a clear focus on cost savings and cost reduction. (AG)		
Because at the end of the day, they are looking for efficiency in the processes. (AC)		
Ultimately, they want to achieve corporate growth, i.e., establish greater efficiencies or better processes. (JL)		
The second reason is quality. There are activities where quality is a prerequisite, but sometimes this cannot be achieved with the human resources available. (SS)		
To understand that RPA is not a panacea, along the lines of '*I'll install RPA and suddenly I'll have a technical assistant that does everything for me*'. This means that we do a lot of expectation management on the customer side, which is very important (MS)	RPA is not a panacea; therefore, expectation management is crucial.	**3. Main concerns and challenges of adopting RPA**
I don't believe that an RPA bot is the solution to all problems, nor does it have to be, but we need to communicate that. (MK)		
But the first information that they first get is a bit falsified: RPA cannot do magic. And many companies that hear about RPA, they think it's going to be magic and […] all tasks are conducted by robots. That is not the case, there is no 100% automation. (AMA)		

But then customers quickly realize that it's not just a case of pressing a button and then all manual tasks are gone and the bot does everything. (LS)		
In my experience, this is where companies are currently getting to, that RPA doesn't work as easily as one would have imagined. (PD)		
RPA is, as I said, sometimes oversimplified, over glorified and/or overpromised. (AMA)		
This is a maintenance problem with changing internal applications. (JJ)	RPA is not a technology that runs independently. Maintenance and upkeep is necessary, especially in changing environments.	
If something in the environment changes regularly, then of course the robot will no longer work. If this happens relatively frequently, acceptance decreases. (PD)		
The problem has always been that those responsible say that the effort to maintain these robots and always being up to date is so high that the question arises as to whether one should not buy a fully automated solution, which of course costs more at the beginning but then it is fully automated. (PD)		
Most people [...] think that with the introduction of RPA everything runs automatically from day one. (JB)		
Some people think that you bring on a robot, and it works all the time, every time with no upkeep. So having these conversations saying there is going to be upkeep, there is going to be errors is crucial. (MKC)		
Codes are changing, software is being upgraded, websites are being updated and all of these minor changes causes the process to stop or the bot needing to be maintained. (AMA)		
You can implement the robot and develop it, but that doesn't mean it will always work. [...] You have to think about who is responsible for maintenance before something like this occurs. (SS)		
It is difficult to explain or understand the added value of RPA as someone who is unfamiliar with the subject. (TV)	There is a lack of awareness and knowledge on how RPA is different from other technologies and on how the specific concepts of RPA can be applied to the organization.	
The biggest challenge is trying to understand what RPA is capable to do. (AC)		
Quite a lot of decision-makers, even if you explain it several times, are not able to classify RPA correctly. (JJ)		
But the fact that RPA is a digital service that works in the background on a server is something that some departments don't even understand during Go lives. (JJ)		
That's why I think the most important thing is to overcome the awareness gap, but also the reservations about RPA, precisely because RPA is still a bit neglected. (JL)		
Many companies know what RPA can basically do, but how exactly to use it, what it can do for my company, this basic understanding behind it is missing. (MA)		
The client does not understand what RPA can bring to their company. (AC)		
The decision against RPA is mostly due to a lack of understanding. (MA)		
The problem is also that people pick up buzzwords, such as AI and RPA. But people don't actually know what they are and associate everything with them. Many think that RPA is artificial intelligence, but that's not true. That's why I would say the problem is that most companies don't understand RPA. (SS)		
There is definitely an awareness gap, because companies tend to bundle optimization, RPA, and AI into one bundle of joy, that we have to piece out and say, this is feasible, this is not. This is RPA, this is optimization and tell them it's different things. (MKC)		
Others tend to be a bit more hesitant about the fact that robots are running on their system applications. (LS)	A lack of trust and acceptance of RPA within the organization is apparent. Clients are	
People question whether a robot that has been configured once can really perform the task as well as a conscientious employee might have done previously. (LS)		
But this topic of low code and citizen development is simply not generally accepted. (MA)		

Inevitably, this always leads to the employee being afraid at first and basically saying 'No, I won't do it and I won't support it'. And that's why the most important thing is to get the employees on board. (PD)	hesitant to trust software bots doing tasks they have done previously.	
Another challenge is that RPA still has a difficult reputation in the sense of click dummies or band-aid solutions. This means that some IT departments in companies do not want to introduce RPA platforms or at least refuse to do so initially. (JL)		
I have the impression that [...] you will never achieve such strong acceptance as with an SAP system, for example. [...] But strangely enough, [RPA] systems are not considered to have the same competence or the same scalability. (MW)		
The biggest concern is whether the software that promises so much will actually deliver everything. (MK)		
The issue of job loss is a major concern when you consider the business side. (AG)	A major concern for employees is job loss as they fear that RPA will replace them.	
Within the business departments and users, there is also often a fear that employees will be laid off after a successful RPA implementation. (RP)		
One of the common concerns of the employees or employee unions is the fear of going to be replaced by bots. (AMA)		
[It is important] that employees are informed that RPA is not there to replace employees but to relieve them. (SS)		
I always try to explain that there are only very few places that I have seen in my entire career where automation has taken jobs. We are trying to take the fear away and ensuring that this way they have more time to do other more meaningful tasks. (MKC)		
The biggest detractor for something like RPA is that people used to think that the idea is to replace them or replace their roles using some robots. But […] we are not able to replace a person or a role, because at the end of the day RPA doesn't have all the capabilities that we have in a human. (AC)		
Because bots are going to work with the company's information, compliance topics and data security/privacy related to the information needs to be addressed and are one of the biggest alerts that the client has. (AC)	Concerns regarding compliance and data privacy arise as RPA works with the company's data.	
What you see very often are questions about data and data protection. The robot will process data and the customer naturally wonders what happens to this data, where it goes, if it is processed outside the company. (RP)		
The concerns are, among other things, data privacy. (SS)		
The cost factor is actually often an issue as to why it didn't work out. There are basic license fees per year, […] runtime environments that have to be licensed, developers also needs licenses. This means that the initial investment for the first level of automation is initially a larger amount. (JL)	The lack of budget for RPA including necessary licenses & implementation costs can be a challenge.	
The budget is a big challenge for small and mid-sized companies. (AMA)		
The departments have usually already planned their budgets in the previous year when the RPA projects may not even have been planned. (JL)		
But the client often approaches the implementation with very little budget. The task [of the consultant] is therefore to ensure that the client has sufficient budget to do the project properly and correctly from the very beginning. (MS)		
I believe the first step should always be to draw up a CFO roadmap or digitalization roadmap. (MK)	Companies need to define the target picture and objectives before starting the implementation.	**4. Key success factors of RPA implementation**
That is why it is extremely important to understand the goals the customer wants to pursue with the platform and its operation, especially to understand the why behind it. (JL)		
Define together what you actually want to achieve with RPA, what the objective is. If you leave out the objective step, the problem is that the customer thinks they want to do RPA, but what they actually want is different. (SS)		
We first classify the customer to see where they stand and what they need to get to the next level. (MA)		

The focus lays on this long-term strategic development and then working on the problems accordingly. (PD)	RPA should be a strategic measure enabling long-term benefits and end-to-end automation.	
You need holistic, strategic measures and in this context you also need to see RPA as a strategic measure and not just as a tool that you buy. (MA)		
The question is always what benefits this technology will bring me over what time horizon. (PD)		
To really drive forward this end-to-end idea in process automation through RPA. (AG)		
Individual technologies and platforms will tend to merge into a holistic digital ecosystem. (TV)	Multiple technologies will be combined to one digital ecosystem.	
The general trend is to take a holistic approach to transformation and change. You don't just look at RPA as a separate piece of software. (JB)		
And it's not one single tool that you need to use to have a successful end-to-end automation, you need to combine different tools because only with RPA alone you can automate some use cases but to have a good digitalization in your company, you need to combine it with smarter tools. (AMA)		
When you think of RPA, you should not think of it in isolation, but as part of a mixed bundle of technologies that complement each other perfectly. (AM)		
All these bots should be part of the ecosystem of hyper automation. (AC)		
RPA really is the assembly line worker. All the other parts deliver the parts or even think about what arrives at the assembly line, but RPA is the assembly line worker who holds everything together. (MS)		
I personally consider RPA a basic component of any digitalization and transformation strategy. (JL)	RPA is considered to be a fundamental part of the company's digitalization and holistic digital transformation. RPA can play the role as driver, accelerator, enabler and means to an end.	
This means they have the opportunity to ultimately launch RPA as an enabler for a digitalization solution. (AG)		
The problem I see is that RPA is being addressed as an isolated topic, but automation and transformation are not really being tackled holistically. (MA)		
RPA definitely belongs in every company's technology stack in order to drive the digitalization of processes and thus the digitalization of the company. (TV)		
RPA is a driver in the scope of the digital transformation. It is a facilitator. (AC)		
In other words, RPA is ultimately part of a sustainable digitalization strategy. (AG)		
RPA is a good gateway to other technologies and transformation initiatives. (MKC)		
I would say that RPA is a means to an end to create concrete added value. (MK)		
I believe that RPA is indeed an essential part of this holistic transformation. (JB)		
RPA is definitely a basic building block for digital transformation. I see RPA as a strategic foundation. (MA)		
RPA definitely accelerates a transformation. (JJ)		
In my experience, you have to be open and transparent about the advantages as well as the disadvantages. (MK)	Transparency regarding the opportunities and challenges is essential.	
The most important thing is to talk to customers and inform them. That means always pointing out what the potential is and making transparent what it is not. It's really important to be fair and not to exaggerate. (PD)		
It is indeed very important as a consultant to announce in advance what the challenges will be. (TV)		
Everyone has picked up on the term automation and then [...] wants to use the technology. At the end of the day, that's not what matters. That's why we always primarily try to understand how the company works. (MA)	A common misconception is that the focus lays on the technology. However,	
The companies always have this technology focus, but what is much more important is the company and not the technology. (MA)		

Many people somehow think from a technological perspective and then want to find the right use case for the technology they want to introduce. Thinking in terms of the problem, i.e. […] saying I want to automate, you can also take an agnostic approach to technology and choose the right technology for the business need. (AM)	the real focus should be the processes and the company itself.	
The technology must fit the use cases and not the other way around. (MW)		
They need this sensitivity between technology, processes, and the company. (MA)		
The biggest challenge is to understand that RPA is not a good idea when you are trying to see the technology as a silo. (AC)		
Of course, you need a supporter in the respective company, someone who can support you in this initiative, ideally you We have a 'top down' approach when the C level says 'RPA will be a fundamental part of our automation and digitalization strategy' […] So if you have the opportunity to involve the C-level, that's a huge advantage. (JL)	C-Level support & having a sponsor are success factors in RPA projects.	
The topic of RPA can ideally be placed top down. (AG)		
The whole project needs a sponsor. Of course, this also means being able to provide the topic with a certain sustainability in order to say what department specific automation goals look like. (AG)		
[...] senior sponsorship. This means that you need someone in the company, for example the CEO, who leads the project at a high management level. This is incredibly valuable because RPA in particular tends to quickly impact many different business areas. (AM)		
What is also very important is C-level approval, i.e., having a sponsor. You need someone who is right at the top and has the authority to drive the project forward. (RP)		
I would say that I naturally try to overcome these concerns with concrete examples. (TV)	Presenting success stories of RPA enable clients to interact with concrete examples.	
The consultant can only go on and on about success stories and keep repeating the numbers. (JJ)		
In addition, you still have the opportunity to bring up success stories. So, use cases that run successfully [...] are quite simple to share and not too abstract for colleagues to understand. (AG)		
This spreading is particularly important in terms of success stories and actively exchanging ideas with other departments and finding new cases. (JB)		
I share experiences and simply show use cases. A robot that somehow automates a process is difficult to grasp. But I can show a typical example of a bot that can be applied to any company […] and when they see how trivial the bot is, it gives them confidence. (SS)		
The whole soft topic is what I just wrote. So of course, you have to pick up the employees accordingly and also communicate what their new tasks are afterwards and why you are doing the project. (PD)	Communication is a success factor as it enables customers to address their concerns and understand how RPA will affect their business and daily tasks.	
I think honesty is the most important thing, in other words open communication with the customer. You have to give the customer the feeling that you are there to help them. (SS)		
A communication strategy must also be put in place in advance. (AG)		
It's all about meeting the person where they are and actually understanding their concerns. (MKC)		
The decision against RPA is mostly due to […] a lack of communication. (MA)		
The marketing among each other and the fact that the employees support the project are the biggest speakers you can have. (MA)	Employee involvement, collaboration, and	
In my experience, the most important success factor is good collaboration with the business owner. (SS)		

The […] collaboration with the person which is doing the process manually is the most important success factor for me. (AC)	support within the RPA project is essential.	
Many companies cite the topic of scaling as a key driver or showstopper of an RPA initiative. (MK)	Scaling determines the success and economical benefit of RPA initiatives.	
A pipeline is the basic rule in any RPA implementation and if they don't fulfill that and build a foundation, then RPA is not a strategic measure. (MA)		
In addition, a RPA platform is not profitable right from the first business case. (JL)		
High entry costs and the return on investment for an entire automation program is on a scaling curve. (AG)		
One of the main challenges we are currently facing is the scaling of automation in the company. (TV)		
The decisive factor for RPA to be successful in your company can be reduced to one sentence: Are you able to implement an automation pipeline in your company that is continuously able to identify new automation potential? If so, then you are successful. (MA)		
Bots will also become more intelligent. They will do this by enriching them with additional technologies. (LS)	RPA can be enhanced by integrating AI and other emerging technologies. This integration allows RPA to be applied to a wider range of use cases by increasing its intelligence and applicability.	
The big potential is, in my opinion, to combine RPA with other technology, like AI. (MKC)		
This means enabling use cases that can be used with AI in the future accordingly. (MK)		
A development can be seen here, but AI could also be used in the more complex applications in general in the future and could partially simulate human decisions. (JJ)		
How can we also support the development activities of bots on the AI side. (MA)		
This means the potential to enrich RPA with other technologies in order to make RPA smarter. (PD)		
I see upward potential in applications in connection with artificial intelligence. (SS)		
I think it is becoming increasingly relevant that we also improve in this area, that the platform becomes better at processing unstructured data. (JL)		
Other intelligent skills are also needed to digitize end-to-end processes and then really have a strategic impact. (TV)		
Implement roadmap for the automation of processes. (AG)		
The potential of RPA has not yet been exhausted. I see large RPA platforms, such as UiPath, as a Lego board. (MS)		
A collaboration model between the automation solution, meaning the RPA bot, and the actual end user, which is also a super interesting construct. (AG)	RPA can be seen as a digital assistant. The collaboration with employees is a key determinant.	
My vision is that in the future we will all have a digital assistant at our side. (AG)		
RPA is ultimately a digital assistant that runs in the background. (TV)		
With RPA they are trying to automate all process steps that one person or a group of people are working on. Companies are trying to do robot process automation, but at the end of the day they are doing robotic task automation, because only parts of the processes are automated with RPA. (AC)		
My goal is to create a basis for customers to continue their program successfully. (TV)	Client needs to get enabled to maintain and drive the RPA initiative on their own.	
In my opinion it should have this kind of role when you are building everything but the consulting company should have the responsibility to transmit all of the knowledge to the client. (AC)		
I think it is ideal if we can take the first step with the customer, but the customer can also walk on their own at some point afterwards. (JB)		
If everything is ready from the process perspective, we can start defining other parameters like what do you want to automate and why do you want to automate. (AC)		

You should also have a certain proportion of digital processes that you can then automate. That's why you should always analyze your own processes beforehand to see whether it makes sense in principle. (JJ)	Identifying automatable processes is a key task within RPA projects.	
You look at the process first and only then consider what is the most sensible solution to automate it. My first step is to look at the processes in detail and consider how they can be optimized. (PD)		
I think you naturally need people in the project who understand the processes to be automated. (JB)		
RPA projects are process consulting projects. (MK)		
You can only automate with RPA if it is standardized and digitalized. This requires a lot of preparation. (SS)	Having digitalized and standardized processes are prerequisites of implementing RPA.	
The company must have a basic digital structure. (JL)		
The harmonization and standardization of processes is the basis for being able to automate. (AG)		
The biggest part is trying to identify the processes which are ready and organized and are already improved. (AC)		
I would not consider the topic of automation separately from two other topics. The first topic is processes and the second is data, meaning data governance and data management. (TV)		
Often […] the requirements in the company are not met. Data is not prepared / processed to such an extent that the bot could deliver the hoped-for added value. (MK)		
We represent the entire journey to RPA. (MA)	Consultants are expected to provide advice around the entire RPA journey instead of merely focusing on implementation.	**5. Role of consultants in RPA projects**
So, the role of the consultants extends to business analysis, standardization, automation, and improvements. (AMA)		
The largest project scopes are definitely the projects in which we map the entire project environment. (JL)		
It's about the consulting company really focusing on the whole range of the project and supporting the project from zero to 100. (AMA)		
It is useful to organize consulting in such a way that [...] I really [have] this end-to-end concept in process or automation consulting. (AG)		
The focus has shifted towards scaling. [...] Then of course the role of the consultant is not only that of building, but the topics around it have become much bigger. (TV)		
We see ourselves as a trusted advisor. (MA)	Consulting companies typically assume the role of experts, trusted advisors, and strategic sparring partners.	
There are many paths, and we as experts are there to guide the customer through this forest of paths. (TV)		
This is crucial in creating this kind of trust relationship. The client trusts what you are doing and what you are not doing. (AC)		
Our role is that of a trusted advisor. (RP)		
We play the role of strategic sparring partner. (PD)		
These are factors why companies prefer external consultants […] Know-how that is missing and where experts are needed. (LS)		
And if companies have decided that they want to combine these automation solutions, [...] if they have perhaps lost track of which platforms they need and want to have a structured approach, then they look for external support. They look for experts who have already dealt with and precisely managed these issues. (TV)		
The role has generally remained the same. (JJ)	Consultants' role within RPA projects has remained rather constant over the past years.	
Our role has always remained constant. (MA)		
I don't think our role as consultants has changed that much. (PD)		
The role has remained constant. (MS)		

The role has remained constant. (MK)		
[Our role] has expanded a bit, but it has always remained rather the same. (MW)		
For us consultants, the most important thing is to keep up to date. (MK)	Consultants have to stay up to date with market trends and technology developments.	
Many customers are now entering this phase of scaling, consultancies need to develop the relevant expertise. (MS)		
We as consultants need to be the ones to keep up with trends and changes. (MKC)		
As consultants, we have to be able to react flexibly to these new influences and integrate them accordingly. (AG)		
We have to react somehow to what's happening on the market, and I think our role is that you have to keep growing, you have to learn more, and you have to know the different tools. (JB)		
The client derives the greatest benefit from [...] the consultant's broad spectrum of knowledge, which he is constantly expanding. (SS)		
From this point of view, it is important that there is independent advice, independent of the company's own product, which considers what benefits the company as a whole. (PD)	Consultants are expected to provide unbiased advice.	
We are not a software provider, which means we do not sell the solution itself, we are not UiPath. Instead, we are as unbiased consultants as possible who implement and advise on topics. (AM)		
We are technology independent. We don't have to sell a technology, instead we first look at the company and only then see which technology might be suitable. (MA)		
So providing independent advice is essential, but I think that will always be difficult. (MW)		
We are facilitators to help the client identify their change management process. (AC)	Change management is an important task for consultants in RPA projects.	
It is really very valuable to consider appropriate change management right from the start. (AG)		
Another part is definitely change management. We have people who do nothing else but change. […] You have to think about the change component in every project. (AM)		
And there is also always some change management involved. The degree depends on the company and how change ready they are. For some we conduct more change management than for others. (MKC)		